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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Edward W. Kohler, Jr., et al. Art Unit : Unknown
 Serial No. : Examiner : Unknown
 Filed :
 Title : Thwarting Source Address Spoofing-Based Denial of Service Attacks



Commissioner for Patents
 Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449, copies of which are enclosed.

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 8/16/2001

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Date of Deposit August 16, 2001

Signature Samantha Bell

Typed or Printed Name of Person Signing Certificate Samantha Bell

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|--|--|---------------------------------------|-----------------|
| Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b)) | U.S. Department of Commerce Patent and Trademark Office | Attorney's Docket No. 12221-006001 | Application No. |
| | Applicant Edward H. Kohler, Jr., et al. | | |
| | Filing Date Herewith | Group Art Unit | |

 1040 U.S. PTO
09/931487


| U.S. Patent Documents | | | | | | | |
|-----------------------|-----------|---------------|------------|----------|-------|----------|----------------------------|
| Examiner Initial | Desig. ID | Patent Number | Issue Date | Patentee | Class | Subclass | Filing Date If Appropriate |
| | AA | | | | | | |
| | AB | | | | | | |
| | AC | | | | | | |
| | AD | | | | | | |
| | AE | | | | | | |
| | AF | | | | | | |
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| | AH | | | | | | |
| | AI | | | | | | |

| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | | |
|---|-----------|-----------------|------------------|--------------------------|-------|----------|-------------|----|
| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation | |
| | | | | | | | Yes | No |
| | AJ | | | | | | | |
| | AK | | | | | | | |
| | AL | | | | | | | |
| | AM | | | | | | | |
| | AN | | | | | | | |

| Other Documents (include Author, Title, Date, and Place of Publication) | | |
|---|-----------|---|
| Examiner Initial | Desig. ID | Document |
| | AO | Steve Bellovin. DDoS Attacks and Pushback. NANOG21, Feb 18, 2001 http://www.aciri.org/pushback |
| | AP | Ratul Manajan, Steven M. Bellovin, Sally Floyd, Vern Paxson, Scott Shenker, and John Ioannidis. Controlling High Bandwidth Aggregates in the Network. draft paper, Feb 2001. http://www.aciri.org/pushback |
| | AQ | Stefan Savage, David Wetherall, Anna Karlin and Tom Anderson. Practical Network Support for IP Traceback. Proceedings of 2000 ACM SIGCOMM, Stockholm, Sweden, August 2000. http://www.cs.washington.edu/homes/savage/traceback.html |
| | AR | Steve Bellovin. ICMP Traceback Messages. AT&T Labs Research, Mar 2000. http://www.research.att.com/~smb/papers/draft-bellovin-itrace-00.txt |

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| Examiner Signature | Date Considered |
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | |

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|-----------------------|-----------|---------------|------------|----------|-------|----------|----------------------------|
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| | AS | | | | | | |
| | AT | | | | | | |
| | AU | | | | | | |
| | AV | | | | | | |
| | AW | | | | | | |
| | AX | | | | | | |
| | AY | | | | | | |
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| | AAA | | | | | | |

| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | | |
|---|-----------|-----------------|------------------|--------------------------|-------|----------|-------------|----|
| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation | |
| | | | | | | | Yes | No |
| | ABB | | | | | | | |
| | ACC | | | | | | | |
| | ADD | | | | | | | |
| | AEE | | | | | | | |
| | AFF | | | | | | | |

| Other Documents (include Author, Title, Date, and Place of Publication) | | |
|---|-----------|--|
| Examiner Initial | Desig. ID | Document |
| | AGG | Cisco. Characterizing and Tracing Packet Floods Using Cisco Routers. http://www.cisco.com/warp/public/707/22.html |
| | AHH | D. Senie. RFC2644 (BCP34), Changing the Default for Directed Broadcasts in Routers. IETF, August 1999. http://www.ietf.org/rfc/rfc2644.txt |
| | AII | P. Ferguson, D. Senie. RFC2827 (BCP38): Network Ingress Filtering: Defeating Denial of Service Attacks which employ IP Source Address Spoofing. IETF, May 2000. http://www.ietf.org/rfc/rfc2827.txt |
| | AJJ | David G. Andersen, Hari Balakrishnan, and M. Frans Kaashoek, Robert Morris. The Case for Resilient Overlay Networks. Proc. of HotOS-VIII, Schloss Elmau, Germany, May 2001. http://nms.lcs.mit.edu/papers/ron-hotos2001.pdf |

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| | AKK | | | | | | |
| | ALL | | | | | | |
| | AMM | | | | | | |
| | ANN | | | | | | |
| | AOO | | | | | | |
| | APP | | | | | | |
| | AQQ | | | | | | |
| | ARR | | | | | | |
| | ASS | | | | | | |
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| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | | |
|---|-----------|-----------------|------------------|--------------------------|-------|----------|-------------|----|
| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation | |
| | | | | | | | Yes | No |
| | AUU | | | | | | | |
| | AVV | | | | | | | |
| | AWW | | | | | | | |
| | AXX | | | | | | | |
| | AYY | | | | | | | |

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| | AZZ | Cisco. Web-Site Security and Denial-of-Service Protection. http://www.cisco.com/warp/public/cc/pd/si/11000/prodlit/cswsc_wi.htm |
| | AAAA | Analysis of a Denial of Service Attack on TCP" by Schuba et al Proceedings of the 1997 IEEE Symposium on Security and Privacy (IEEE Computer Society Press, May 1997 |
| | ABBB | Stefan Savage, David Wetherall, Anna Karlin and Tom Anderson. Practical Network Support for IP Traceback. Work in progress Technical Report UW-CSE-00-02-01. Date unknown. http://www.cs.washington.edu/homes/savage/traceback.html |
| | ACCC | Web page entitled "Aggregate Based Congestion Control and Pushback" last modified April 2001 Found at http://www.aciri.org/pushback |

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| | ADDD | | | | | | |
| | AEEE | | | | | | |
| | AFFF | | | | | | |
| | AGGG | | | | | | |
| | AHHH | | | | | | |
| | AIII | | | | | | |
| | AJJJ | | | | | | |
| | AKKK | | | | | | |
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| Foreign Patent Documents or Published Foreign Patent Applications | | | | | | | | |
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| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation | |
| | | | | | | | Yes | No |
| | AMMM | | | | | | | |
| | ANNN | | | | | | | |
| | AOOO | | | | | | | |
| | APPP | | | | | | | |
| | AQQQ | | | | | | | |

| Other Documents (include Author, Title, Date, and Place of Publication) | | |
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| Examiner Initial | Desig. ID | Document |
| | ARRR | D. Song et al., "Advanced and Authenticated Marking Schemes for IP Traceback", Proc. IEEE INFOCOM, April 2001, pp. 878-886. |
| | ASSS | R. Stone, "CenterTrack: An IP Overlay Network for Tracking DoS Floods", Proceedings of 9 th USENIX Security Symposium, Denver, CO, August 2000, pp. 199-212. |
| | ATTT | H. Burch et al., "Tracing Anonymous Packets to Their Approximate Source", Proc. USENIX LISA 00, December 2000, pp. 319-327. |
| | AUUU | |

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